

Plate Tectonics ▪ *Guided Reading and Study***Earth's Interior**

This section explains how scientists learn about Earth's interior. The section also describes the layers that make up Earth and explains why Earth acts like a giant magnet.

Use Target Reading Skills

Before you read the passage for each heading, fill in the top box with what you know. After you have read the passage, fill in the bottom box with what you have learned.

What You Know
1. Earth's crust is made of rock.
2.
3.
4.
5.

What You Learned
1.
2.
3.
4.
5.

Exploring Inside Earth

1. What prevents geologists from directly exploring Earth's interior?

2. Geologists use direct evidence from _____ to learn about Earth's interior.

3. Geologists learn about Earth's interior using indirect evidence from

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Earth's Interior *(continued)*

4. Is the following sentence true or false? Earth looks the same today as it did millions of years ago. _____
5. Seismic waves reveal the structure of Earth through their _____ and _____.
6. Circle the letter of each sentence that is true about Earth.
 - a. Indirect evidence of Earth's interior comes from studying rock samples.
 - b. Geologists cannot observe Earth's interior directly.
 - c. It is over 6,000 kilometers from the surface to the center of Earth.
 - d. Geologists learn about Earth's interior by drilling holes.
7. _____ waves are produced by earthquakes.

A Journey to the Center of Earth

8. How does the temperature change as you go from the surface toward the center of Earth? _____

9. How does pressure change as you go from the surface toward the center of Earth? _____
10. The three main layers that make up Earth are the _____,
_____, and _____.

The Crust

11. The _____ is a layer of rock that forms Earth's outer skin.
12. Is the following sentence true or false? The crust is thinnest under high mountains. _____
13. The dark-colored rock that makes up most of the oceanic crust is _____.
14. The light-colored rock that makes up most of the continental crust is _____.

Plate Tectonics ▪ *Guided Reading and Study***The Mantle**

Match the name of each layer of the mantle with its description.

- | Layer | Description |
|-------------------------|---|
| _____ 15. lower mantle | a. Rigid layer that includes the upper part of the mantle and the crust |
| _____ 16. lithosphere | b. Solid material beneath the asthenosphere |
| _____ 17. asthenosphere | c. Soft layer just below the lithosphere |
18. Is the following sentence true or false? The asthenosphere is not considered solid because it can bend like plastic. _____
19. Is the following sentence true or false? The mantle is nearly 3,000 kilometers thick. _____

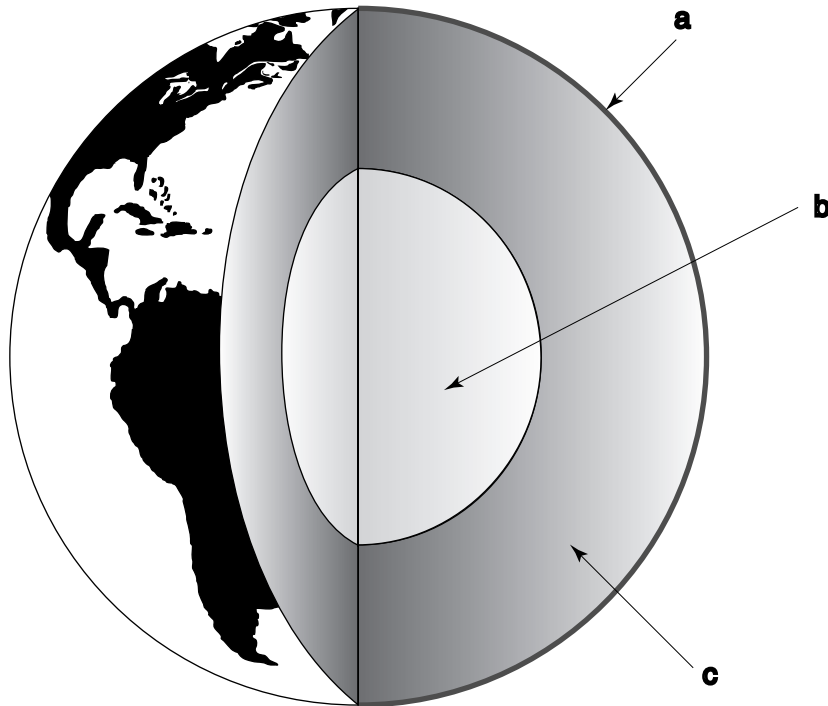
The Core

20. Circle the letter of each sentence that is true about Earth's outer core.
- a. It is under low pressure.
 - b. It is made of solid metal.
 - c. It contains iron and nickel.
 - d. It is a solid.
21. Circle the letter of each sentence that is true about Earth's inner core.
- a. It consists of molten metal.
 - b. It is a thick liquid.
 - c. It is not very dense.
 - d. It is under extreme pressure.

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Earth's Interior *(continued)*

22. In the drawing, label the three main layers of Earth.



23. Describe how a compass needle aligns itself. _____

24. What creates Earth's magnetic field? _____